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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0070033
TaskID: 4577
Mine Name: WILDCAT LOADOUT
Title: RESPONSE TO NOV #10132

General Contents

Legal Description

Analysis:

The disturbed area is described in Section R645-301-212 as 88.62 acres.

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Environmental Resource Information

Soils Resource Information

Analysis:

The application describes the addition of 6.83 acres to the disturbed area boundary as shown on Plate 1. This area was included in a baseline soil survey conducted by James Nyenhuis for Mt. Nebo Scientific in 2003, see Appendix D. The soils in this location are predominantly Hernandez loam, 1-6% slopes, a prime farmland soil when irrigated. Laboratory analysis of sample locations WC 6 and WC 10 indicates that soil pH, EC and SAR increase with depth, becoming undesirable after 24 inches. The 2003 soil survey substantiates a twenty four inch soil salvage depth from this 6.83 acre area, should an expansion of operations occur.

This 6.83 acre expansion area has not had topsoil removed, but the area was vacuumed in 2010, mulched and seeded. On January 24, 2014 during a Division meeting at the site, the coal fines were found to be greater than six inches in much of this 6.83 acre area. Directly south, over a small ridge, a 12 acre area had been mechanically cleared of coal fines and topsoil was removed, and then the area was mulched and seeded in 2010. This area was only lightly covered with coal fines in 2014 and had good vegetation growth after the 2010 treatment. Thus the impact of coal fines on the vegetation and soil appears negligible if the depth of the fines does not smother the growing plants.

Therefore, as stated in Section R645-301-200, on January 24, 2014, the Division determined that an appropriate response to NOV 10132, given the lack of immediate need for expansion, was to mechanically clear coal fines from the 6.83 acre area and protect the topsoil 'in situ'. The re-exposed soil was seeded with blue grama grass, desert globemallow, desert marigold, sand dropseed, slender wheatgrass, western wheatgrass and purple three awn (see Wildcat incoming folder 3/11/2014).

Operation Plan

Topsoil and Subsoil

Analysis:

The disturbed area is described as 88.62 acres in the MRP Section 645-301-212.

Plate 13 illustrates four existing topsoil storage piles and the proposed expansion of topsoil pile A. Plate 13 suggests that there may be 16,029 yd³ stockpiled for reclamation. Information on Plate 13 supercedes the topsoil summary on p. 2-4 of the MRP which lists 17,204 yd³ in storage. Plate 13 indicates that topsoil is stockpiled on 2.84 acres.

Plate 13A shows the location of in-situ topsoil storage with an area of 6.83 acres and an approximate volume of 16,530 yd³ (18 inches of topsoil and substitute topsoil).

The Wildcat site currently has a deficit of topsoil to achieve the goal of six inches of topsoil replacement depth over 75.67 acres (Plate 1B). Protection of an additional 16,530 yd³ of suitable topsoil and substitute topsoil is assured by this amendment as storage 'in situ' (Plate 13A). This amendment doubles volume of topsoil and topsoil substitute available for final reclamation.

Protection of the 'in situ' storage is described in Section R645-301-212, p 2-6. Since the site is downwind of the coal stockpile, the soil will be monitored for accumulations of coal fines and the site will be mechanically cleaned if the fines accumulate to a depth of four inches and reseeded with the interim mix on page 2-27 and 2-28. In addition, a wind fence will be extended along the length of PR-5 as shown on Plate 1 and PR 5 will be graded occasionally to reduce coal fine accumulations (p. 2 Appendix P (information provided with Task 4521). A second wind fence will be constructed above the road along the berm on the coal stockpile (personal communication with Kit Pappas).

Deficiencies Details:

R645-301-121.100, The final submittal in provided response to this deficiency letter must include revisions to Appendix P (periodic grading of PR 5, wind fence extensions, etc.) and Plate 1 (reviewed as Task 4521) and subsequent revisions (reviewed as task 4577).

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Hydrologic Exemptions

Analysis:

In response to deficiencies listed in Task ID 4521, the permittee has submitted additional information regarding it's response to NOV 10132.

In the previous submittal, the permittee had failed to designate one section of disturbed area that does not report to sediment ponds as an ASCA. The permittee responded to this deficiency by adding a section to page 10 of Appendix R describing a "temporary ASCA" that is treating runoff through the use of excelsior logs. This ASCA is designated as "temporary" because the permittee has plans to expand this section of disturbed area. Any changes to this temporary ASCA will be addressed in future submittals.

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Reclamation Plan

Revegetation Mulching and Other Soil Stabilization

Analysis:

Gouging the surface has been changed to indicate grading on the contour, followed by hydroseeding and hydromulching. Previous reclamation of the area south of PR 5 was successful following drill seeding and crimping-in hay mulch. Drill seeding is preferable to hydroseeding/hydromulching because it provides a micro terrace on the contour. Section R645-301-240 of the plan should be revised to indicate drill seeding and crimping-in 1 ton/ac hay mulch with the drill seeder.

Deficiencies Details:

R645-301-240, Previous reclamation of the area south of PR 5 was successful because grading on the contour was followed by drill seeding and crimping-in straw or hay mulch. Where there is no gouging, drill seeding is preferable to hydroseeding/hydromulching because the incorporated mulch will capture rainfall and direct it downward and the drill creates a divet on the contour to collect precipitation. Section R645-301-240 of the plan should be changed to indicate grading on the contour will be followed by drill seeding and crimping-in 1 ton/ac hay or straw mulch with the drill seeding.

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